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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/750,385	12/31/2003	Lance Weston	H0006069-555	8983

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HONEYWELL INTERNATIONAL, INC.
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EXAMINER

DINH, TUAN T

ART UNIT	PAPER NUMBER
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2841

DATE MAILED: 05/31/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/750,385

Applicant(s)

WESTON ET AL.

Examiner

Tuan T. Dinh

Art Unit

2841

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 March 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-61 is/are pending in the application.
- 4a) Of the above claim(s) 1-12 and 27-61 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 13-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12/31/03 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. Applicant's election without traverse of Group II (claims 13-26) in the reply filed on 03/13/06 is acknowledged.

Drawings

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "circuit protection system, claim 13, line 1, and alarm system, claim 20, line 1" must be shown or the feature(s) canceled from the claim(s).

Figures 1-2 do not show a structure of the system as claimed in claims 13 and 20, please verify.

No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering

of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because: reference character "elements 2, 4" has been used to designate both end caps and end connector, see page 7, lines 22-27 and reference character "element 22, 24" has been used to designate both traces and resistor, see page 9, lines 3-6. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

4. Claims 13, 19-20, 24 are objected to because of the following informalities:

Claims 13, 20, line 1, "change "which comprises" to - - comprising - - for proper reading.

Claims 19, 24 are unclear. The phrase of "the planar lip...is closer to said trace than the thickness of the SMT passive component" is not understood. What does applicant mean? Does applicant mean of "the distance between the lip and the trace is less or greater than the thickness of the component? Please verify.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 13-16, and 18-19 are rejected under 35 U.S.C. 102(e) as being anticipated by Whitney et al. (U.S. Patent 7,034,652).

As to claims 13, 19, Whitney et al. discloses an EOS or VVM device (column 3, lines 30-50) as shown in figures 1-6 comprising:

a conductive trace (18) and means for dissipating a transient (column 12, lines 4-21),

a surface mount passive component/SMT resistor (154, see figure 6A, column 11, line 51) having opposed end caps (156, 158), each of said end caps including a lip, each lip being disposed in spaced relationship to said conductive trace (18, the trace is formed on a circuit board 160, see column 11, line 52).

As to claim 14, Whitney et al. discloses said lips have respective edges thereof, which are mutually parallel, see figure 6B.

As to claims 15-16, 18, Whitney et al. discloses each lip is generally planar and said trace is also generally planar, and said lips and said trace are generally parallel (the trace and lips both formed planar on a surface of the PCB 160).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Whitney et al. (U.S. Patent 7,034,652).

Regarding claim 17, Whitney et al. discloses all of the limitations of the claimed invention, except for an edge of each lip is approximately .01 inch from said trace.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have a distance between the lip and the trace approximately

0.01 inch in order to prevent short circuit when the solder applied to connect the lip of the component on the board.

Claimed variations in relative dimensions, which do not specify a device, which performs or operates any differently from the prior art, do not patentably distinguish applicant's invention. Gardner v. TEC Systems, Inc., 725 F.2d 1338 (Ct. App. Fed. Cir. 1984).

9. Claims 20-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Whitney et al. ('652) in view of Hailey et al. (U.S. Patent 6,337,798).

As to claims 20-25, Whitney et al. discloses all of the limitation of the claimed invention, see Whitney disclosed in claims 13-16, and 18-20), except for a conductive layer formed on an insulating layer having conductive path.

Hailey et al. teaches a multilayer circuit board (3) as shown in figure 1C comprising conductive layers (31-33) formed alternately on insulating layer (between the conductive layers) having paths.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have a teaching of Hailey et al. employed in the PCB (160) of Whitney et al. in order to provide an electrical interconnection.

Regarding claim 26, Whitney and Hailey et al. disclose all of the limitations of the claimed invention, except for an edge of each lip is approximately .01 inch from said trace.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have a distance between the lip and the trace approximately 0.01 inch in order to prevent short circuit when the solder applied to connect the lip of the component on the board.

Claimed variations in relative dimensions, which do not specify a device, which performs or operates any differently from the prior art, do not patentably distinguish applicant's invention. Gardner v. TEC Systems, Inc., 725 F.2d 1338 (Ct. App. Fed. Cir. 1984).

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Blecha et al., West, and Neuhalfen disclose related art.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuan T. Dinh whose telephone number is 571-272-1929. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kammie Cuneo can be reached on 571-272-1957. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

A handwritten signature in black ink, appearing to read 'Tuan Dinh', with a long, sweeping horizontal stroke extending to the right.

Tuan Dinh
May 23, 2006.